## PATENT ABSTRACTS OF JAPAN

(11)Publication number:

2000-172236

(43) Date of publication of application: 23.06.2000

(51)Int.CI.

G09G 3/36GO2F 1/133

GO9G 3/20

(21)Application number: 11-277352

(71)Applicant: OPTREX CORP

ASAHI GLASS CO LTD

(22)Date of filing:

29.09.1999

(72)Inventor: NAKAZAWA SATOSHI

KITAMURA MASAKAZU

TAMAI KIYOSHI **NAGAI MAKOTO** 

(30)Priority

Priority number: 10278503

Priority date: 30.09.1998

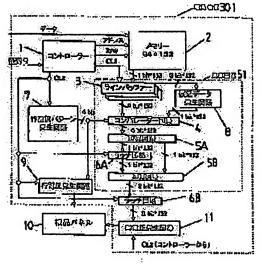
Priority country: JP

## (54) DRIVING DEVICE AND LIQUID CRYSTAL DISPLAY DEVICE

## (57)Abstract:

PROBLEM TO BE SOLVED: To provide a driving device of an MLA driving method suppressing an increase in the circuit scale in the case of being integrated by keeping an increase of the current consumption suppressed with the circuit configuration optimized.

SOLUTION: A driving device 301 of a liquid crystal device 10 comprises a controller 1, a memory 2, a row selection pattern generating circuit 7, a row voltage generating circuit 9, a latch circuit 6B, a column voltage generating circuit 11, an arithmetic circuit 51 (a line buffer 3, a comparator circuit 4, adding circuits 5A, 5B, a latch circuit 6A, a virtual data generating circuit 8). And the device adopts an expanded orthogonal matrix B of six simultaneous selection rows, two virtual rows, and four row orthogonal matrix A as a row selection pattern, and calculates column output voltages in units of A.



## LEGAL STATUS

[Date of request for examination] [Date of sending the examiner's decision of rejection]

[Kind of final disposal of application other than the examiner's decision of rejection or application converted registration]

[Date of final disposal for application]

[Patent number]

[Date of registration]

[Number of appeal against examiner's decision of rejection]

[Date of requesting appeal against examiner's decision of rejection]

[Date of extinction of right]

Copyright (C); 1998,2003 Japan Patent Office